

CLAIM AMENDMENTS

Please amend the claims as follows:

1-76. (Canceled)

77. (Currently Amended) A method of acidizing a subterranean formation penetrated by a well bore comprising the steps of:

providing a permeability-modifying aqueous treatment fluid comprising

a relative permeability modifier comprising a hydrophobically modified water-soluble polymer that comprises polar heteroatoms within the polymer backbone, wherein the hydrophobically modified water-soluble polymer is capable of reducing permeability of the subterranean formation to an aqueous-based fluid, or a hydrophilically modified water-soluble polymer that comprises a polymer backbone comprising polar heteroatoms, wherein the hydrophilically modified water-soluble polymer is a reaction product of a hydrophilic polymer and a hydrophilic compound;

providing an acidizing treatment fluid;

injecting the permeability-modifying aqueous treatment fluid into the subterranean formation; and

injecting the acidizing treatment fluid into the subterranean formation.

78. (Original) The method of claim 77 wherein the permeability-modifying aqueous treatment fluid further comprises an aqueous-based fluid.

79. (Original) The method of claim 77 wherein the relative permeability modifier reduces the permeability of the treated zone of the subterranean formation to aqueous-based fluids, thereby diverting the acidizing treatment fluid to other zones of the subterranean formation.

80. (Original) The method of claim 77 wherein the relative permeability modifier has a molecular weight in the range of from about 100,000 to about 10,000,000.

81. (Original) The method of claim 77 wherein the polar heteroatoms present within the polymer backbone of the hydrophobically modified water-soluble polymer comprise oxygen, nitrogen, sulfur, or phosphorous.

82. (Original) The method of claim 77 wherein the hydrophobically modified water-soluble polymer is present in the permeability-modifying aqueous treatment fluid in an amount

in the range of from about 0.02% to about 10% by weight of the permeability-modifying aqueous treatment fluid.

83. (Original) The method of claim 77 wherein the hydrophobically modified water-soluble polymer is a reaction product of a hydrophilic polymer that comprises a polymer backbone comprising polar heteroatoms and a hydrophobic compound.

84. (Original) The method of claim 83 wherein the hydrophilic polymer comprises a cellulose, a polyamide, a polyetheramine, a polyhydroxyetheramine, a polysulfone, or a starch.

85. (Original) The method of claim 84 wherein the starch comprises a cationic starch.

86. (Original) The method of claim 83 wherein the hydrophobic compound comprises an alkyl halide, a sulfonate, a sulfate, or an organic acid derivative.

87. (Original) The method of claim 86 wherein the organic acid derivative comprises an octenyl succinic acid; a dodecenyl succinic acid; or an anhydride, ester, or amide of octenyl succinic acid or dodecenyl succinic acid.

88. (Original) The method of claim 83 wherein the hydrophobic compound has an alkyl chain length of from about 4 to about 22 carbons.

89. (Canceled)

90. (Canceled)

91. (Currently Amended) The method of claim ~~89~~ 77 wherein the wherein the polar heteroatoms present within the polymer backbone of the hydrophilically modified water-soluble polymer comprise oxygen, nitrogen, sulfur, or phosphorous.

92. (Currently Amended) The method of claim ~~89~~ 77 wherein the hydrophilic polymer comprises dialkyl amino pendant groups.

93. (Currently Amended) The method of claim ~~89~~ 77 wherein the hydrophilic polymer comprises a dimethyl amino pendant group and at least one monomer comprising dimethylaminoethyl methacrylate or dimethylaminopropyl methacrylamide.

94. (Currently Amended) The method of claim ~~89~~ 77 wherein the hydrophilic polymer comprises a polyvinylamine, a poly(vinylamine/vinyl alcohol), or an alkyl acrylate polymer.

95. (Currently Amended) The method of claim ~~89~~ 77 wherein the hydrophilic polymer comprises polydimethylaminoethyl methacrylate, polydimethylaminopropyl methacrylamide, poly(acrylamide/dimethylaminoethyl methacrylate), poly(acrylic

acid/dimethylaminoethyl methacrylate), poly(methacrylic acid/dimethylaminoethyl methacrylate), poly(2-acrylamido-2-methyl propane sulfonic acid/dimethylaminoethyl methacrylate), poly(acrylamide/dimethylaminopropyl methacrylamide), poly(acrylic acid/dimethylaminopropyl methacrylamide), or poly(methacrylic acid/dimethylaminopropyl methacrylamide).

96. (Currently Amended) The method of claim 89 77 wherein the hydrophilic polymer comprises a polymer backbone comprising polar heteroatoms.

97. (Original) The method of claim 96 wherein the polar heteroatoms present within the polymer backbone of the hydrophilic polymer comprise oxygen, nitrogen, sulfur, or phosphorous.

98. (Original) The method of claim 96 wherein the hydrophilic polymer comprises a cellulose, a chitosan, a polyamide, a polyetheramine, a polyethyleneimine, a polyhydroxyetheramine, a polylysine, a polysulfone, or a starch.

99. (Original) The method of claim 98 wherein the starch comprises a cationic starch.

100. (Currently Amended) The method of claim 89 77 wherein the hydrophilic compound comprises a polyether comprising halogen; a sulfonate; a sulfate; or an organic acid derivative.

101. (Original) The method of claim 100 wherein the organic acid derivative comprises an octenyl succinic acid; a dodecenyl succinic acid; or an anhydride, ester, or amide of octenyl succinic acid or dodecenyl succinic acid.

102. (Original) The method of claim 100 wherein the polyether comprises a polyethylene oxide, a polypropylene oxide, a polybutylene oxide, or a mixture thereof.

103. (Original) The method of claim 100 wherein the polyether comprises an epichlorohydrin terminated polyethylene oxide methyl ether.

104. (Original) The method of claim 100 wherein the weight ratio of the hydrophilic polymer to the polyether is in the range of from about 1:1 to about 10:1.

105. (Currently Amended) The method of claim 89 77 wherein the hydrophilically modified water-soluble polymer comprises a reaction product of polydimethylaminoethyl methacrylate with epichlorohydrin terminated polyethyleneoxide methyl ether; a reaction product of polydimethylaminopropyl methacrylamide with epichlorohydrin terminated

polyethyleneoxide methyl ether; or a reaction product of poly(acrylamide/dimethylaminopropyl methacrylamide) with epichlorohydrin terminated polyethyleneoxide methyl ether.

106. (Original) The method of claim 105 wherein the hydrophilically modified water-soluble polymer comprises a reaction product of a polydimethylaminoethyl methacrylate with epichlorohydrin terminated polyethyleneoxide methyl ether having a weight ratio of polydimethylaminoethyl methacrylate to epichlorohydrin terminated polyethyleneoxide methyl ether of 3:1.

107. (Original) The method of claim 77 wherein the permeability-modifying aqueous treatment fluid further comprises a gelling agent.

108. (Original) The method of claim 107 wherein the permeability-modifying aqueous treatment fluid further comprises proppant.

109. (Original) The method of claim 77 wherein the permeability-modifying aqueous treatment fluid is injected into the subterranean formation at a pressure sufficient to create or enhance at least one fracture therein.

110. (Original) The method of claim 77 wherein the acidizing treatment fluid is injected into the subterranean formation at a pressure sufficient to create or enhance at least one fracture therein.

111. (Original) The method of claim 77 wherein the permeability-modifying aqueous treatment fluid is injected into the subterranean formation prior to the acidizing treatment fluid.

112. (Original) The method of claim 77 wherein the permeability-modifying aqueous treatment fluid is injected into the subterranean formation simultaneously with the acidizing treatment fluid.

113-186. (Canceled)